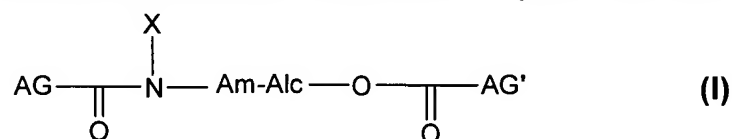


In the claims:

1. (Original) Process for the synthesis of ceramide-type compounds, characterized in that it includes at least an amide formation step, performed by means of the lipase B-type enzyme of *Candida antarctica*, and an esterification step, also performed by means of a lipase-type enzyme, and in that the ceramide-type compounds correspond to the general formula (I) :



in which the group Am-Alc figures a C2 to C6 carbon chain, preferably saturated, linear or optionally branched, obtained from an amino-alcohol ; X figures a hydrogen atom or a C1 to C4 carbon chain, optionally hydroxylated on the 2' and/or following positions of the amino group ; and in which each of the groups AG and AG' figures a C4 to C30 carbon chain, saturated or unsaturated, obtained from a fatty acid or a fatty acid ester ; the two groups AG and AG' may be identical or different.

2. (Original) Process according to claim 1, characterized in that the amide formation step is carried out under stoichiometric conditions between a fatty acid and/or its ester and an amino-alcohol at a temperature comprised between 40 and 100°C.

3. (Currently amended) Process according to claim 1 ~~or claim 2~~, characterized in that the amide formation is carried out without solvent, at a minimal temperature of about 65°C.

4. (Currently amended) Process according to ~~one of the claims 1 to 3~~, claim 1 characterized in that the amide formation is carried out under a reduced pressure comprised between 1 and 500 mbars and during at least 16 hours.

5. (Currently amended) Process according to ~~one of the claims 1 to 4~~, claim 1 characterized in that the esterification is performed by means of the *Rhizomucor miehei* lipase.

6. (Original) Process according to claim 5, characterized in that the esterification reaction is carried out with a ratio fatty acid ester/amino-alcohol comprised between 1 and 2.

7. (Currently amended) Process according to claim 5 ~~or claim 6~~, characterized in that the esterification reaction is carried out at a temperature comprised between 40 and 90°C.

8. (Currently amended) Process according to ~~one of the claims 5 to 7~~, claim 5 characterized in that the esterification reaction is carried out without solvent, at a minimal temperature of about 65°C.

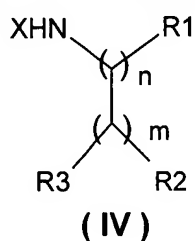
9. (Currently amended) Process according to ~~one of the claims 5 to 8~~, claim 5 characterized in that the esterification reaction is carried out under a reduced pressure comprised between 1 and 500 mbars and during at least 18 hours.

10. (Currently amended) Process according to ~~one of the claims 1 to 9~~, claim 1 characterized in that the enzymes used in each step are immobilized on an inert support.

11. (Currently amended) Process according to ~~one of the claims 1 to 10~~, claim 1 characterized in that the amide formation reaction by means of the *Candida antartica* lipase B and the esterification reaction by means of the *Rhizomucor miehei* lipase are both carried out without solvent, optionally simultaneously, at a minimal temperature of about 65°C and under a reduced pressure comprised between 30 and 200 mbars.

12. (Currently amended) Process according to ~~one of the claims 1 to 11~~, claim 1 characterized in that the amino-alcohols are C2 to C6 compounds, preferably saturated, linear or optionally branched and the fatty acids and/or their esters have a C4 to C30, preferably C10 to C22 carbon chain, saturated or unsaturated, optionally hydroxylated.

13. (Currently amended) Process according to ~~one of the claims 1 to 12~~, claim 1 characterized in that the starting amino-alcohol corresponds to formula (IV):



in which :

- n is an integer selected from the numbers 1, 2, 3 and m is an integer selected from the numbers 1, 2, 3,
- X is selected from the group composed of hydrogen and a C1 to C4 carbon chain, optionally hydroxylated on the positions 2' and/or followings of the amino group;
- R1 is selected from the group composed of hydrogen and a C1 to C4 carbon chain, preferably saturated, linear, optionally branched and/or hydroxylated,
- R2 is selected from the group composed of hydrogen, -OH, NH₂ and a C1 to C4 carbon chain, preferably saturated, linear, optionally branched and/or hydroxylated,
- R3 is selected from the group composed of hydrogen, -OH and -CH₂OH,

and in which at least one of the groups R1, R2 or R3 includes a –OH group.

14. (Currently amended) Process according to ~~one of the claims 1 to 13~~, claim 1 characterized in that the amide formation step is performed before the esterification step.